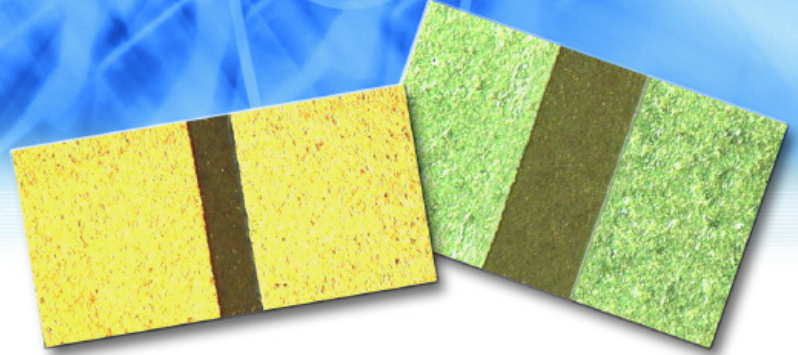


# CSB Series Dual-Pad Chip Capacitors



A single full electrode is provided on one side of the capacitor and split electrodes on the other side. This is a three-terminal capacitor which can be used as two capacitors with a common electrode or as serially connected capacitors so that connections may be made on one side of the chip only (surface-mount). This design is often used in microstrip coupling to eliminate lead inductance and raise the self resonance frequency. The table shows industry standard SMT sizes, however unlimited variations are available to meet your application requirements.

- CAPACITANCE: 0.08 TO 2,500 PICO FARADS
- CHIP SHAPES: DUAL SQUARES WITH GAP
- GAP WIDTHS: 5, 10, 15, 20 MIL OR CUSTOM

## CSB Part Number Assembly

Example shown: COMPEX Series CSB dielectric type C-100, .050" x .020" max. x .007", .01" gap, gold, 12pF, ±20% tolerance.

**CSB - 100 - 50 x 20 M x 7 - 10 - G -120 - M**

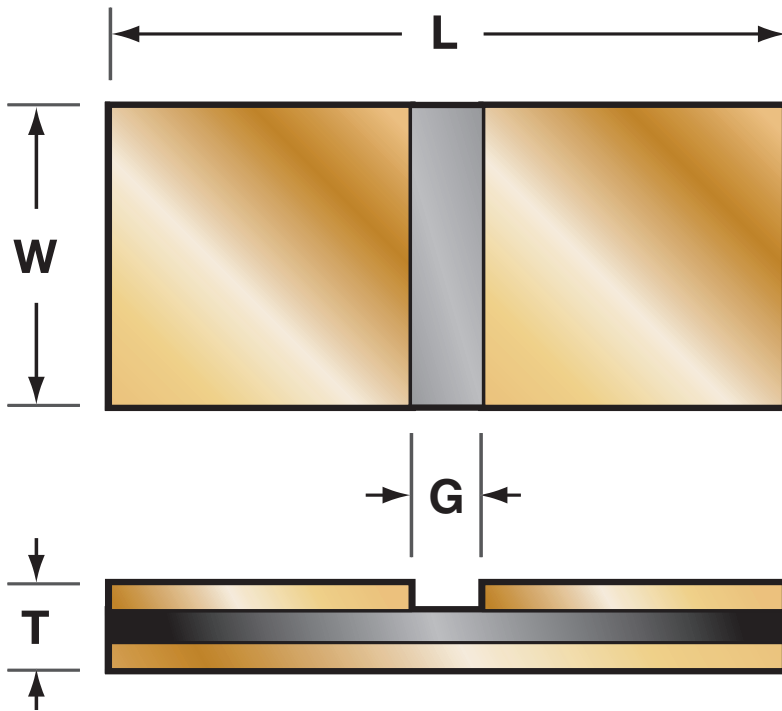
Capacitor Style		Metallization <b>G</b> (gold) or <b>T</b> (tin)
Dielectric Type <i>See Class I and Class II tables (page 3)</i>		Capacitance (pF) First two digits represent significant figures and the last, the number of zeros to follow. When required, the letter "R" is used as a decimal point and the succeeding digits represent significant figures only. eg.: 101 = 100pF, 1R6 = 1.6pF
Length x Width (milli-inches) <i>See CSB Chip Dimensions (at right)</i>		Capacitance Tolerance <i>See CSB Standard Capacitance Tolerance Codes (below)</i>
Insert <b>M</b> or leave blank (See <i>Note</i> below)		
Thickness <b>4-10</b> (milli-inches) <i>See CSB Selection Chart (at right)</i>		
Gap <b>5, 10, 15</b> or <b>20</b> (milli-inches)		

**Note:** Standard dimensional tolerance for length and width is ±15% up to 20 mils. For dimensions greater than 20 mils, standard tolerance is ±10%. In cases where dimension *can not to be exceeded*, insert "M" to signify a Maximum dimension. The thickness tolerance is ±1.5 mils.

## CSB Standard Capacitance Tolerance Codes

Class I Dielectrics: C-20 thru C-75				Class II Dielectrics: C-80 thru C-200			
Tolerance	Code	Tolerance	Code	Tolerance	Code	Tolerance	Code
±20%	<b>M</b>	±10%	<b>K</b>	±20%	<b>M</b>	-10% thru +40%	<b>Y</b>
±15%	<b>L</b>	±5%	<b>J</b>	±15%	<b>L</b>	-20% thru +80%	<b>Z</b>
				±10%	<b>K</b>	Guaranteed Min. Value	<b>GMV</b>

## CSB Chip Dimensions

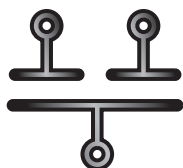


This capacitor chip consists of two capacitors in series, each of which is two times the desired capacitance, and thus two times the area, in order to achieve the desired equivalent capacitance. Therefore, to determine the size of the chip for any desired capacitance, length or width, the following formula applies:  

$$\text{Length} = (2A + 2A / \text{Width}) + \text{Gap}$$

## CSB Electrode Configuration

Split electrodes



## CSB Selection Chart

Cap. (pF)	Cap Size 20x10		Cap Size 40x20		Cap Size 60x30		Cap Size 80x40	
	Die. Thick.		Die. Thick.		Die. Thick.		Die. Thick.	
0.06	C-50	5	C-30	5	C-20	5	C-20	10
0.08	C-50	4	C-30	4	C-30	10	C-20	7
0.1	C-60	8	C-50	10	C-30	8	C-20	6
0.2	C-60	4	C-50	6	C-30	4	C-30	7
0.3	C-70	5	C-50	4	C-50	10	C-30	5
0.4	C-80	7	C-60	7	C-50	7	C-30	4
0.5	C-80	5	C-60	6	C-50	6	C-50	10
0.6	C-80	4	C-60	5	C-50	5	C-50	9
0.8	C-80	4	C-70	6	C-60	9	C-50	7
1	C-90	9	C-70	5	C-60	7	C-50	5
1.2	C-90	7	C-80	8	C-60	6	C-50	4
1.5	C-90	6	C-80	6	C-60	5	C-60	9
1.8	C-90	5	C-80	5	C-70	7	C-60	8
2	C-90	4	C-80	5	C-70	6	C-60	7
2.2	C-100	8	C-80	4	C-70	5	C-60	6
2.7	C-100	7	C-80	10	C-70	4	C-60	5
3.3	C-100	5	C-90	9	C-80	7	C-70	7
3.9	C-100	4	C-90	8	C-80	6	C-70	6
4.7	C-120	8	C-90	6	C-80	5	C-70	5
5.6	C-120	7	C-90	5	C-80	4	C-80	8
6.8	C-120	5	C-100	9	C-90	10	C-80	7
8.2	C-120	4	C-100	8	C-90	9	C-80	5
10	C-130	5	C-100	6	C-90	7	C-80	5
12	C-140	7	C-100	5	C-90	6	C-80	4
15	C-140	6	C-120	9	C-90	5	C-90	9
18	C-140	5	C-120	7	C-100	9	C-90	8
20	C-140	4	C-120	6	C-100	8	C-90	7
22	C-140	4	C-120	6	C-100	7	C-90	6
27	C-200	8	C-120	6	C-100	6	C-90	5
33	C-200	5	C-130	5	C-100	5	C-100	9
39	C-200	5	C-140	8	C-120	8	C-100	7
47			C-140	7	C-120	7	C-100	6
56			C-140	5	C-120	6	C-100	5
68			C-140	4	C-120	5	C-120	9
82			C-200	8	C-130	5	C-120	7
100			C-200	8	C-140	8	C-120	6
120			C-200	5	C-140	6	C-120	5
150					C-140	5	C-130	5
180					C-140	4	C-140	8
200					C-140	4	C-140	7
220					C-200	8	C-140	6
270					C-200	5	C-140	5
330					C-200	5	C-140	4
390							C-200	8
470							C-200	8
560							C-200	8
680							C-200	5
820							C-200	5

Class I Dielectrics

Class II Dielectrics